Background:

The Heritage Documentation Programs (HDP) consist of The Historic American Building Survey, The Historic American Engineering Record, The Historic American Landscapes Survey (HABS/HAER/HALS), and the Cultural Resources GIS. HDP is tasked by the National Park Service with creating guidelines and standards for the documentation of America's architectural, engineering, and landscape heritage through the production of measured drawings, large-format photographs and written histories. Archival materials are maintained in a special collection at the Library of Congress, available to the public copyright free in both hard copy and electronic formats. HDP partners with state and local governments, private industry, professional societies, universities, preservation groups, and other Federal agencies. Measured drawings enter the collection through a summer recording program that trains students in preservation documentation, mitigation activities under sections 106 and 110 of the National Historic Preservation Act of 1966, submissions in prize competitions, and donations. The collection provides permanent records of a wide variety of historic sites and is distinguished in its national scope, consistent format, archival stability, and continued growth. The documentation also contributes to wider recognition and appreciation of historic resources; provides baseline documentation for rehabilitation and restoration; and makes available well-researched materials for interpretation and illustration.

Abstract:

The NPS creates a variety of documents and records, such as inventory and monitoring plans, drawings, photographs, and conservation treatment records, to assist in the planning, management and preservation of cultural resources. Most of these, including many of 3D digital documentation products, are permanent records under the NPS Records Retention schedule, requiring the NPS to preserve them in some form. In addition, under NPS Director's Order 19, cultural resource management records are mission critical, required for the management of the cultural resources within our parks, and must be permanently preserved. Programs such as HABS/HAER/HALS create large amounts of electronic data, such as point clouds, CAD files, and digital field photographs that constitute valuable field data permitting the verifiability of the final documentation.

Electronic records, particularly laser scanning and imaging technologies, present long-term preservation and storage challenges. Even technologies that allow for a file format with an open standard, such as a point cloud conversion to ASCII, are still problematic because of inadequate IT infrastructure within that does not facilitate storage, migration and retrieval of digital data. Moreover, the Library of Congress (LOC), which houses

traditional print HABS/HAER/HALS documentation and is the sole repository designated in the National Historic Preservation Act for engineering and architectural documentation produced for Sections 106 and 110 compliance, has collections policies prohibiting proprietary software and storing of data directed at a limited audience that would prevent the inclusion of many of the products being discussed at this summit.

Despite on-going efforts for several years, resolving these issues has proven problematic. The LOC and HABS/HAER/HALS are jointly exploring born digital equivalents to large-format film photography that is currently required to meet Secretary of Interior Standards, but the lack of standards within the commercial photography community as well as the high cost of large-format digital capture and storage makes writing standards difficult. Likewise, the lack of industry standards for technologies such as laser scanning, and the reliance on proprietary software and file formats, discourages the LOC from accepting these files into its collections. Because of this, HABS/HAER/HALS uses laser scanning as a tool to create traditional print drawings on vellum or mylar that can be permanently preserved at LOC, rather than producing laser scans as an end product in and of itself. HABS/HAER/HALS also is consulting with the National Archives and Records Administration (NARA) to determine if some of these file types can be preaccessioned into the Electronic Records Archives (ERA). Currently the file formats that can be preaccessioned are extremely limited, but we hope that NARA can accommodate more in the future. With no other public repository for these files, NPS has few alternatives but to maintain its own digital records and confront the technological and financial challenges this presents. NPS has no IT preservation system in place to prevent the gradual decay of storage media over time and the corruption of electronic files, also known as bit rot. Creating a digital storage system modeled on Open Archive Information System (OAIS), which runs file integrity checks to guard against data loss, would require a significant investment in infrastructure and money at a time when the NPS is facing a multi-billion dollar maintenance backlog for its historic structures.

In sum, 3D digital documentation can produce some exciting products that were not previously possible, but we must recognize that the challenges associated with digital preservation put all of these products at risk unless we find solutions that permit their responsible and economical curation and preservation.

Contact:

Anne Mason
Collections Manager
HABS/HAER/HALS
1201 Eye St., NW

Washington, DC 20005
anne_mason@nps.gov
phone - 202-354-2250
fax - 202-371-6473

Anne began working for the National Park Service in 2001 at the National Register of Historic Places and National Historic Landmark programs as a Digital Library Production Manager, overseeing the digitization of the National Register archives. She has served as the Collections Manager for HABS/HAER/HALS since 2006, working closely with the Library of Congress to preserve and manage the collection. She has been an advocate for thoughtful digital preservation within NPS.